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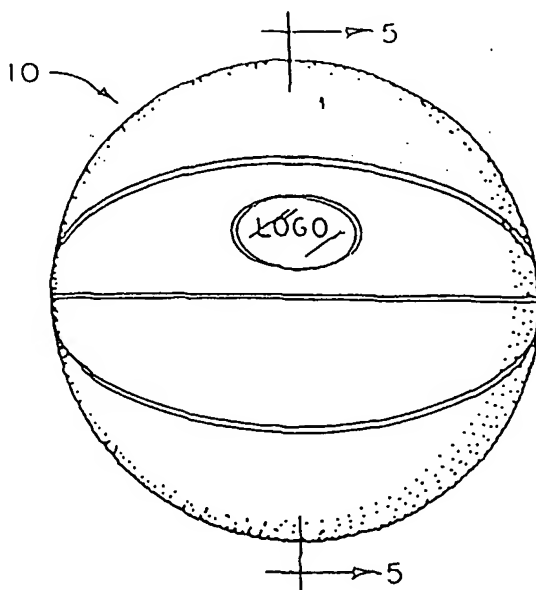
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GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
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European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR,  
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(54) Title: MEDALLION GAMEBALL



(57) Abstract: A medallion ball (10) comprising a bladder (12) fabricated of an air impervious elastomeric material in a spherical configuration; a carcass coupled to the exterior surface of the bladder with a recess formed in the carcass; and a medallion (32) positionable in a central region of the recess with the medallion having an exterior surface with indicia.

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## MEDALLION GAMEBALL

### Related Application Data

5 This application is a continuation in part of Application Serial Number 09/405,898 which is a continuation in part of Application Serial Number 09/019,997, both of which are incorporated herein by reference.

### Field of the Invention

10 The present invention relates to a medallion gameball and more particularly pertains to providing distinctive indicia in the form of a medallion on the surface of a gameball.

### Description of the Prior Art

15 The use of balls with indicia of various designs and configurations is known in the prior art. More specifically, balls with indicia of various designs and configurations heretofore devised and utilized for the purpose of marking balls and other objects with indicia through various methods and apparatuses are known to consist basically of familiar, expected, and obvious structural configurations, notwithstanding the  
20 myriad of designs encompassed by the crowded prior art which has been developed for the fulfillment of countless objectives and requirements.

By way of example, note U. S. Patent No. 5,320,345 to Lai et al., U. S. Patent No. 5,419,552 to Meyer, U.S. Patent No. 5,427,372 to Ratner et al., U.S. Patent No. 5,497,699 to Mather, U.S. Patent No. 5,518,234 to Palmquist and U.S. Patent No. 3,091,562 to J. C. Berlepsch, Jr., et al.  
25

While these devices fulfill their respective, particular objectives and requirements, the aforementioned patents do not describe medallion  
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gameball that allows providing distinctive indicia in the form of a medallion to the surface of a gameball or other objects.

In this respect, the medallion gameball according to the present invention substantially departs from the conventional concepts and designs of the prior art, and in doing so provides an apparatus primarily developed for the purpose of providing distinctive indicia in the form of a medallion within the surface of gameballs.

Therefore, it can be appreciated that there exists a continuing need for a new and improved medallion gameball which can be used for providing distinctive indicia in the form of a medallion within the surface of gameballs. In this regard, the present invention substantially fulfills this need.

#### Summary of the Invention

In view of the foregoing disadvantages inherent in the known types of balls with indicia of various designs and configurations now present in the prior art, the present invention provides an improved medallion gameball. As such, the general purpose of the present invention, which will be described subsequently in greater detail, is to provide a new and improved medallion gameball and method which has all the advantages of the prior art and none of the disadvantages.

To attain this, one aspect of the present invention essentially comprises a bladder fabricated of an air impervious elastomeric material in a spherical configuration with spiral strands ; a carcass in a spherical configuration overlying the strands with a recess formed as an oval formed in its exterior surface, the oval having a depth of between about 0.5 and 3.5 millimeters, preferably about 2.0 millimeters, with a major axis constituting between 3 and 20 percent, preferably about 8.5 percent, of the circumference of the carcass, the carcass having a series of oval ribs with a thickness of between about 0.2 and 2.0

millimeters, preferably about 1.0 millimeters, extending outwardly away from the carcass; a plurality of panels coupled to the exterior surface of the carcass between the ribs, the panels having a thickness of between about 0.2 and 2.0 millimeters, preferably about 1.0 millimeters, with an oval aperture formed in one of the panels to expose the recess in the carcass and an oval rib; and a medallion positioned on the carcass in a central region of the recess with the medallion having an exterior surface with indicia formed thereon with a layer of a transparent polymer over the indicia.

There has thus been outlined, rather broadly, the more important features of the invention in order that the detailed description thereof that follows may be better understood and in order that the present contribution to the art may be better appreciated. There are, of course, additional features of the invention that will be described hereinafter and which will form the subject matter of the claims appended hereto.

In this respect, before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and to the arrangements of the components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments and of being practiced and carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of descriptions and should not be regarded as limiting.

As such, those skilled in the art will appreciate that the conception, upon which this disclosure is based, may readily be utilized as a basis for the designing of other structures, methods and systems for carrying out the several purposes of the present invention. It is important, therefore, that the claims be regarded as including such equivalent constructions insofar as they do not depart from the spirit and scope of the present invention.

It is therefore an object of the present invention to provide a new and improved medallion gameball which has all of the advantages of the prior art balls with indicia of various designs and configurations and none of the disadvantages.

5 It is another object of the present invention to provide a new and improved medallion gameball which may be easily and efficiently manufactured and marketed.

It is a further object of the present invention to provide a new and improved medallion gameball which is of durable and reliable constructions.

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As even further object of the present invention is to provide a new and improved medallion gameball which is susceptible of a low cost of manufacture with regard to both materials and labor, and which accordingly is then susceptible of low prices of sale to the consuming public, thereby making such Medallion gameball economically available to the buying public.

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Even still another object of the present invention is to provide a medallion gameball for providing distinctive indicia in the form of a medallion within the surface of gameballs.

20 Lastly, it is an object of the present invention to provide a new and improved medallion gameball including a bladder fabricated of an air impervious elastomeric material in a spherical configuration with spiral strands therearound, a carcass coupled to the exterior surface of the bladder with a recess formed in the carcass, and a medallion positionable in a central region of the recess with the medallion having an exterior surface with indicia formed.

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These together with other objects of the invention, along with the various features of novelty which characterized the invention, are pointed out with particularity in the claims annexed to and forming a part of this disclosure. For a better understanding of the invention, it

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is operating advantages and the specific objects attained by its uses, reference should be had to the accompanying drawings and descriptive matter in which there is illustrated preferred embodiments of the invention.

5

#### Brief Description of the Drawings

The invention will be better understood and objects other than those set forth above will become apparent when consideration is given to the following detailed description thereof. Such description makes reference to the annexed drawings wherein:

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Figure 1 is a perspective view of one preferred embodiment of the medallion gameball constructed in accordance with the principles of the present invention.

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Figure 2 is an enlarged view of the medallion portion of the ball of Figure 1.

Figure 3 is similar to Figure 1 without the exterior covering to expose the interior structure.

Figure 4 is similar to Figures 1 and 3 with only a portion of the interior exposed.

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Figure 5 is a cross sectional view taken along line 5-5 of Figure 1.

Figure 6 is an enlarged view taken at the circle 6 of Figure 5.

Figure 7 is similar to Figures 1, 3 and 4, but illustrating an alternative embodiment of the invention.

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Figure 8 is an enlarged cross sectional view taken along line 8-8 of Figure 7.

Figure 9 is a view of a gameball employing a flanged medallion.

Figure 10 is a sectional view taken along line 10-10 of Figure 9.

Figure 11 is a view of a volleyball employing the flanged medallion of the present invention.

30

Figure 12 is a sectional view taken along line 12-12 of Figure 11.

The same reference numerals refer to the same parts through the various figures.

## 5 Description of the Preferred Embodiment

With reference now to the drawings, and in particular to Figure 1 thereof, the preferred embodiment of the new and improved medallion gameball embodying the principles and concepts of the present invention and generally designated by the reference numeral 10 will be described.

The gameball 10 includes an exterior surface. The medallion gameball comprises a medallion disposed within an aperture in the gameball exterior surface and substantially flush with, or recessed below, the gameball exterior surface. The medallion of Figure 1 is shown as being oval, however the medallion may have any shape, for example it may be circular or polygonal. The medallion is fabricated of a rigid or semi-rigid polymeric material with indicia 36 therein. The indicia can take on many forms. The indicia can include text or pictures. The indicia can be a hologram. The indicia can comprise a thermochromic material that changes appearance with changes in temperature. The indicia can comprise a photochromic material that changes appearance with changes in lighting. A layer of conventional transparent polymeric material, for example urethane, is formed over the indicia 36. The transparent polymeric material forms an exterior surface 34 of the medallion and functions to protect the indicia during use of the gameball.

For ease of understanding and clarity of description, the inventive medallion gameball is below described in its application to basketballs.

It should be understood that the invention herein is equally applicable to other gameballs such as, for example, golf balls, softballs, baseballs, soccer balls, volleyballs, footballs, rugby balls and tennis balls.

The central component of the medallion basketball is a bladder 12. Such bladder is preferably fabricated of an air impervious elastomeric material in a spherical configuration. The preferred material is a vulcanized butyl rubber compound, such as, for example, Exxon Butyl 065 or Polysar Butyl 100. Such bladder is wrapped with strands 16. Such strands are of essentially inelastic material, preferably nylon or polyester multi-filament strands wrapped around the bladder in random configuration to maintain the size and shape of the ball when inflated and during use.

A carcass 22 is formed over the windings. Such carcass is fabricated of a rubber compound molded over the wound bladder. Natural rubber (cis polyisoprene) is preferred for improved rebound and abrasion resistance. A mixture of rubbers may also be used, such as natural rubber and styrene butadiene rubber. Such carcass has an oval rib 24. Such rib has a thickness of between about 0.2 and 2.0 millimeters, preferably about 1.0 millimeters. In addition, a plurality of supplemental ribs 26 are provided. Such ribs have a thickness of between about 0.2 and 2.0 millimeters, preferably about 1.0 millimeters extending outwardly away from the carcass.

The carcass is molded to include a recess 18. The recess is formed as an oval in the exterior surface of the carcass. The recess area has a depth of between about 0.5 and 3.5 millimeters, preferably 2.0 millimeters. The major axis of the oval constitutes between 3 and 20 percent, preferably about 8.5 percent, of the circumference of the carcass.



The basketball 10 also comprises a plurality of panels 28, preferably leather, coupled to the exterior surface of the carcass between the supplemental ribs. Such panels may be of a natural leather or of a synthetic leather. These panels have a thickness of between  
5 about 0.2 and 2.0 millimeters, preferably about 1.0 millimeters. An oval aperture 30 is formed in one of the panels to expose the recess in the carcass and the oval rib.

Finally, the medallion basketball comprises a medallion 32 positionable on the carcass in a central region of the recess. The  
10 medallion is preferably secured in position by a pressure sensitive adhesive or a flexible cross-linked urethane adhesive.

Other adhesives are also suitable for use in securing the medallion to the carcass. One such adhesive is a pressure sensitive hot melt adhesive, such as PL919 offered by SIA Adhesives, Incorporated of  
15 Chicago, Illinois. In the preferred embodiment, a layer of between 0.005" and 0.015" is applied to the back of the medallion. Subsequently, both the medallion and the ball are heated. The goal of such heating is to bring the adhesive to about 250 degrees Fahrenheit. After heated the medallion is pressed into position in such a manner that  
20 intimate contact between the ball and medallion is achieved. To this end, a contoured tool may be utilized. Upon cooling, the medallion is secured to the carcass.

A second possible adhesive is a pressure sensitive adhesive. One such pressure sensitive adhesive is a system from 3M which employs  
25 a #300LSE high strength acrylic adhesive and 9671LE and 9672LE laminating adhesives. In utilizing such a system, heat is not required to activate the adhesive, but is helpful in ensuring proper contact between the carcass and medallion.

A contact adhesive is yet another alternative. A suitable contact  
30 adhesive is 3M's 1357 contact adhesive. In utilizing this alternative,

the contact adhesive is applied to both the ball and medallion. The solvent contained in the adhesive is then allowed to flash, thereby removing the solvent from the adhesive and increasing its tackiness. Optionally, a second layer of adhesive can then be applied. The medallion and carcass are then brought into contact. After 24 hours a full strength bond is achieved. In all of the above described adhesive alternatives, cleaning the bonded surfaces before adhesive application results in superior results. Alcohol, or other suitable solvents, can be employed in cleaning the surfaces. Additionally, adhesive promoters or primers can be used. An example of a suitable primer is Lord Corporation's Chemlock 77707 primer.

In another embodiment the medallion 52 incorporates a flange 54. Such flange 54 is integral with the periphery of the medallion 52 and is used in securing the medallion 52 in place. More specifically, the flange 54 is covered by one or more of the plurality of panels of the ball. In this manner, the flanged medallion 52 provides for increased securement between the medallion 52 and ball. Naturally, the adhesive may also be used to additionally secure the medallion to the gameball. In the preferred embodiment the flange 54 is between 1/8" to 1/4" in width and is formed about the entire perimeter of the medallion 52. In an alternative embodiment, the flange 54 is scalloped to reduce wrinkling once secured to the ball. The flange 54, however, is not covered with the urethane dome, as is the center of the medallion 52. Additionally, the upper panel 56 of the ball includes a cut out 58 sized to expose the center of the medallion 52, but not the flange 54. Namely, when secured the laminated panel 56 covers the flange 54 but not the urethane dome. In this manner only the dome portion of the medallion 52 containing the indicia 36 is visible.

The preferred thickness of the medallion 52 is about 0.05" with a manufacturing tolerance on thickness of about +/- 0.10. Such a

thickness enables the surface of the medallion 52 to be flush with the remainder of the surface of the gameball. The medallion 52 can be formed into a variety of shapes. Nonetheless, the preferred medallion 52 has major diameters of 1.5" and 2.6". An alternative size employs diameters of 1.3" and 2.4". The size and shape of the medallion 52 is, in part, dependent upon the type of ball upon which it is employed. For example, the medallions of the present invention can be affixed to other types of inflated balls, including soccer balls, volleyballs and footballs. An example of a volleyball employing the flanged medallion 52 is illustrated in Figure 11.

An alternative embodiment of the invention is shown in Figures 7 and 8. In such embodiment, the panels 38 are formed integral with the carcass. Such panels are preferably formed with a surface to simulate the appearance and feel of natural leather. In such embodiment one panel includes a recess 40 molded therein to a depth equal to the depth of the carcass between the ribs where the medallion is received as in the primary embodiment as discussed above and with a medallion discussed above. This allows for a less costly fabrication than would occur with the previously described embodiment wherein the separate leather panels are individually coupled to the carcass.

In another embodiment the medallion is incorporated in a non-spherical gameball such as an American football. The football comprises a layer of bladder material such as the previously described butyl rubber or a polyurethane material. A reinforcing lining is located immediately over the bladder, and immediately over the lining, a leather cover is situated. A lining is employed to help the ball retain the proper shape and to provide additional strength and mechanical reinforcing to the cover material. Significant amounts of stress and strain are imposed on the cover by the forces generated by the inflated bladder. Typically, the ball is inflated to about 12 - 15 psi and much of this force is

imposed on the leather cover. Overstress conditions can be imposed through kicking, bouncing, and the rough handling that a ball typically receives while in play. The lining helps the ball maintain shape and structural integrity in the face of these conditions. The cover material is formed of synthetic leather or natural leather panels that have been tanned. The football cover includes a seam where panels of the leather cover of the ball meet and are sewn together. Apertures formed in the cover of the ball allow the passage of lacings that seal an opening in the cover through which the bladder and liner are inserted. One panel includes an aperture in which a medallion is disposed. The medallion may be secured in place mechanically with a flange or by adhesive as previously described. The thickness of the medallion is controlled so that the exterior of the medallion is preferably flush with the exterior of the leather panel.

In other embodiments the medallion is incorporated between the core and cover of other gameballs. For example, the medallion may be incorporated between the cork and winding core and leather cover of a softball or baseball in similar fashion to that described above. Alternatively, the medallion may be incorporated between the core and cover of a golf ball or tennis ball. In any embodiment it is preferred that the medallion fit within an aperture in the cover so that the exterior of the medallion is substantially flush with the exterior surface of the gameball.

As to the manner of usage and operation of the present invention, the same should be apparent from the above description. Accordingly, no further discussion relating to the manner of usage and operation will be provided.

Therefore, the foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents  
5 may be resorted to falling within the scope of the invention.

What is Claimed is:

1. a game ball comprising:  
a core supporting an outer cover, the outer cover defining an aperture therein and an exterior surface; and  
5 a medallion positioned within the aperture and substantially flush with or recessed below the exterior surface.
2. The game ball of claim 1, wherein the aperture defines a circumferential shape and the medallion comprises a shape registerable  
10 with the aperture shape.
3. The game ball of claim 1, wherein the medallion comprises a polygonal shape.
- 15 4. The game ball of claim 1, wherein the medallion comprises a hologram.
5. The game ball of claim 1, wherein the medallion comprises a thermochromic material.  
20
6. The game ball of claim 1, wherein the medallion comprises a photochromic material.
7. The game ball of claim 1 comprising a non-spherical shape.

8. The game ball of claim 1 comprising a football.
9. The game ball of claim 1 selected from the group consisting of a golf ball, a softball, a baseball, a basketball, a soccer ball, a volley ball,  
5 a football and a tennis ball.
10. The game ball of claim 1, wherein the outer cover defines an exterior surface and the medallion is recessed below the surface.
- 10 11. The game ball of claim 1, wherein the core is selected from the group consisting of an inflatable bladder overlaid by a reinforcing layer and a cork center overlaid by filaments.
12. An inflatable game ball comprising:  
15 an inflatable bladder;  
a reinforcing layer overlying the bladder;  
a cover overlying the reinforcing layer, the cover defining an exterior surface and an aperture therein; and  
a medallion disposed within the aperture and substantially flush  
20 with or below the exterior surface.
13. The game ball of claim 12, wherein the medallion extends inwardly beyond an interior surface of the cover.
- 25 14. The game ball of claim 12, wherein the cover is comprised of a plurality of panels.

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FIG. 1

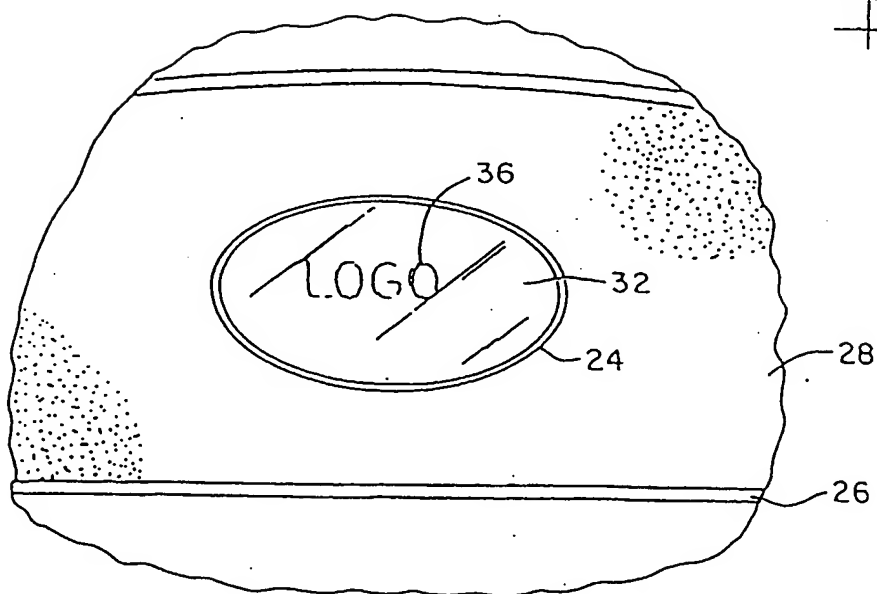
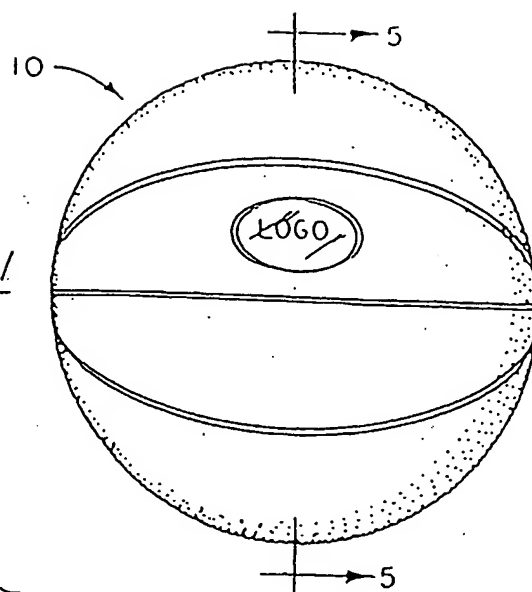


FIG. 2

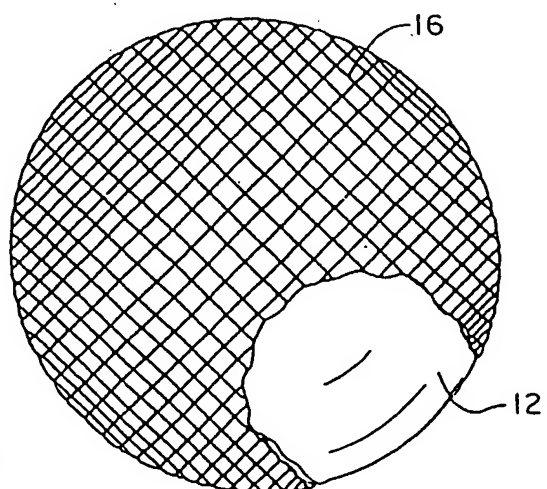


FIG. 3



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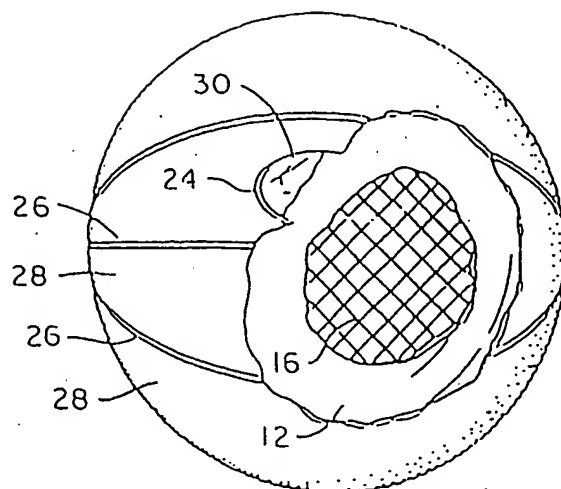


FIG. 4

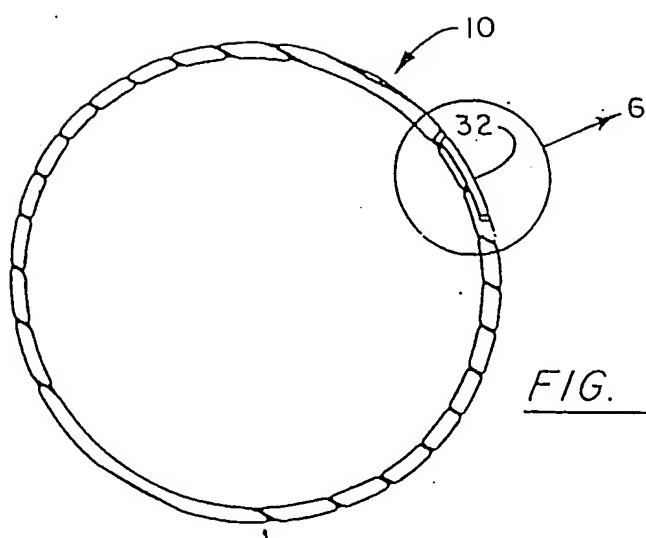


FIG. 5

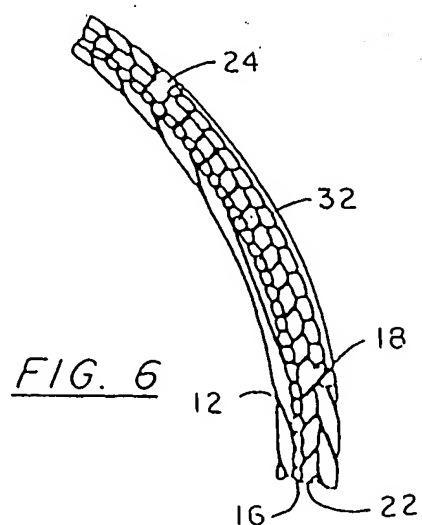


FIG. 6

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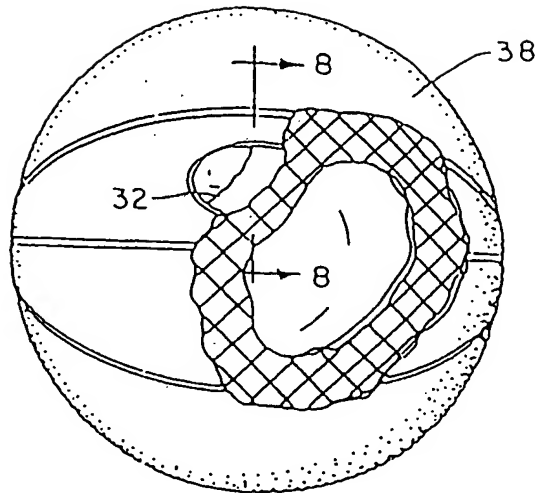


FIG. 7

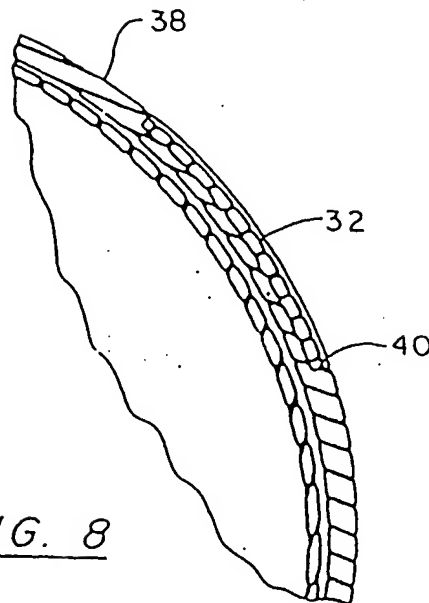


FIG. 8

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FIG 9

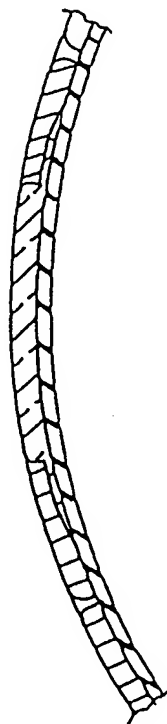
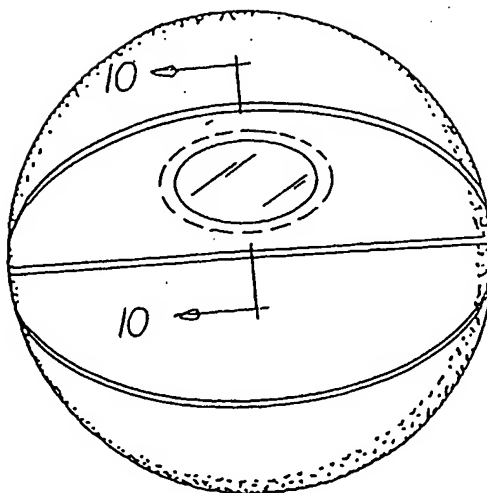


FIG 10

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FIG 11

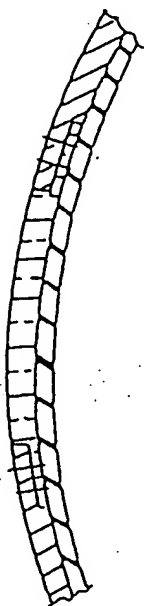
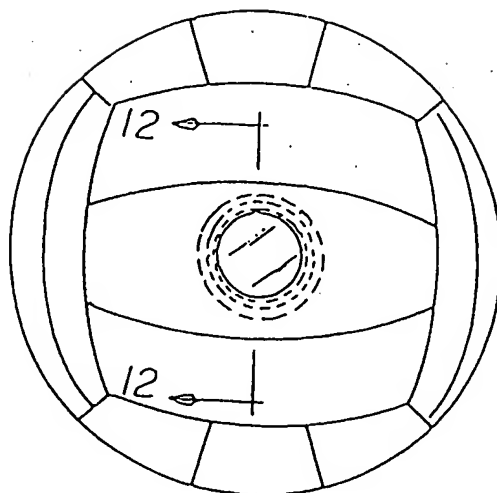


FIG 12

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US02/0324

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A63B 41/08

US CL : 473/603, 604

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 473/603, 604, 599, 605, 607, 609; 40/327

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
noneElectronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
none

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3,879,876 A (MORGAN) 29 April 1975, see entire document.	1, 2, 10
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Y		3-6
Y	US 5,762,573 A (KENNEDY, III ET AL.) 09 June 1998, see entire document.	4
Y	US 4,917,643 A (HIPPELY ET AL.) 17 April 1990, see entire document.	5
Y	US 4,134,853 A (EHRlich ET AL.) 16 January 1979, see entire document.	6



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:	"I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
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Date of the actual completion of the international search

15 MAY 2002

Date of mailing of the international search report

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## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US02/04324

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,320,345 A (LAI ET AL.) 14 June 1994, see entire document.	1, 7-14
Y	US 1,826,538 A (WOLLASTON) 06 October 1931, see entire document.	1, 7-14

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